

REMARKS/ARGUMENTS

Claims 1-37 are pending in the present application. The Examiner has rejected claims 1-37. Applicant respectfully requests reconsideration of pending claims 1-37.

The Examiner has rejected claims 1, 8, 10, 17, and 24 on the "ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,510,158 B1 in view of Sorinsuo et al. (U.S. Patent No. 6,148,001) and Shimojo (U.S. Patent No. 6,934,296)." Applicant respectfully disagrees.

Regarding claims 1, 10, and 17, Applicant submits the Examiner has not established a *prima facie* showing of obviousness with respect to the subject matter of claims 1, 10, and 17. While the Examiner has alleged "changes from the patented claim 1" and teachings relative to alleged differences with respect to the alleged changes, Applicant submits the Examiner appears not to have alleged any teaching or suggestion with respect to several features of claims 1, 10, and 17.

As one example, with respect to claim 1, Applicant sees no allegation of teaching with respect to "buffering data of each of the plurality of virtual connections into a corresponding one of a plurality of buffers, wherein each of the plurality of virtual connections is identified by an identifier." As another example, Applicant sees no allegation of teaching with respect to "wherein the merged virtual connection is identified by a merged identifier." As yet another example, Applicant sees no allegation of teaching with respect to "A method for merging a plurality of virtual connections to form a merged virtual connection" other than the Examiner's mere assertion that "'virtual circuit' in the patent claim is 'virtual connection' in the current claims."

As one example, with respect to claim 10, Applicant sees no allegation of teaching with respect to "a plurality of buffers, wherein each buffer of the plurality of buffers corresponds to a virtual connection of a plurality of virtual connections, wherein each of the plurality of virtual connections has a unique identifier, wherein data received for each of the plurality of virtual connections are buffered in corresponding buffers of the plurality of buffers." As another example, Applicant sees no allegation of teaching with respect to "a queuing block that stores identities of virtual connections that have complete packets buffered in the plurality of buffers, wherein a complete packet includes a plurality of units of data." As yet another example, Applicant sees no allegation of teaching with respect to "a prioritization block that stores prioritization information." As a further example, Applicant sees no

allegation of teaching with respect to "a merging system controller operably coupled to the plurality of buffers, the queuing block, and the prioritization block, wherein the merging system controller dequeues data from the plurality of buffers based on the prioritization information and the identities stored in the queuing block to produce a data stream corresponding to a merged virtual connection, wherein data are dequeued from the plurality of buffers by the merging system controller such that data from a packet are included in a continuous portion of the data stream for the merged virtual connection, wherein data included in the data stream for the merged virtual connection include an identifier corresponding to the merged virtual connection."

As one example, with respect to claim 17, Applicant sees no allegation of teaching with respect to "a processing module." As another example, Applicant sees no allegation of teaching with respect to "memory operably coupled to the processing module, wherein the memory stores operating instructions that, when executed by the processing module, cause the processing module to perform the functions of:...."

For the foregoing reasons, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to the subject matter of claims 1, 10, and 17, which the Examiner claims to have "rejected on the ground of nonstatutory obviousness-type double patenting." Therefore, Applicant submits claims 1, 10, and 17 are in condition for allowance.

Regarding claims 8 and 24, Applicant submits the Examiner has not established a *prima facie* showing of obviousness with respect to the subject matter of claims 8 and 24. While the Examiner has alleged "changes from the patented claim 1" and teachings relative to alleged differences with respect to the alleged changes, Applicant submits the Examiner appears not to have alleged any teaching or suggestion with respect to several features of claims 8 and 24.

As an example, with respect to claim 8, Applicant has cited features of claim 1, from which claim 8 depends, for which Applicant sees no allegation of teaching. Thus, Applicant submits no *prima facie* showing of obviousness has been established for dependent claim 8.

As an example, with respect to claim 24, Applicant sees no allegation of teaching with respect to "wherein the memory further comprises operating instructions such that the processing module determines that data that constitute a complete packet are buffered by detecting an end of message

indication that indicates a final data element for the complete packet." Moreover, Applicant notes claim 24 depends from claim 17, of which Applicant has cited elements for which Applicant sees no allegation of teaching, as noted above.

For the foregoing reasons, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to the subject matter of claims 8 and 24, which the Examiner claims to have "rejected on the ground of nonstatutory obviousness-type double patenting." Therefore, Applicant submits claims 8 and 24 are in condition for allowance.

The Examiner has rejected claims 1, 17, 25 and 35-37 under 35 U.S.C. §112 as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully disagrees.

Regarding claims 1, 17 and 25, the Examiner states there is insufficient antecedent basis for the limitation "queuing the identity." Applicant notes the application has been examined and five previous Office actions have been mailed in this application. Applicant further notes three of those five previous Office action appear to have been mailed after claim 25 was added. In reviewing those five previous Office actions, Applicant does not see any allegation of "queuing the identity" as failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Thus, Applicant submits the Office has apparently previously found claims 1, 17, and 25 to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Moreover, Applicant notes the Office action mailed 07/08/2003 included the following:

Claim Objections

3. Claims 1, 4 and 17 are objected to because of the following informalities: "queuing identity of a virtual connection" should be changed to, e.g., "queuing the identity of a virtual connection." Appropriate correction is required.

Thus, Applicant submits the Examiner's rejection of claims 1 and 17 is obviated by Applicant's compliance with a specific requirement imposed by the Office. Applicant submits the subject matter of claim 25 is not inconsistent with such requirement. Therefore, Applicant submits claims 1, 17 and 25 are in condition for allowance.

Regarding claims 35 and 36, the Examiner states there is insufficient antecedent basis for "the dequeuing." Applicant has amended claims 35 and 36. Applicant submits claims 35 and 36 are in condition for allowance.

Regarding claim 37, the Examiner states there is insufficient antecedent basis for "each interval" in line 4. Applicant has amended claim 37. Applicant submits claim 37 is in condition for allowance.

The Examiner has rejected claims 1-37 under 35 U.S.C. §103(a) as allegedly being unpatentable over Soirinsuo et al. (US Patent No. 6,146,001) in view of Shimojo (US Patent No. 6,934,296 B2). Applicant respectfully disagrees.

Regarding claims 1, 10, 17 and 25, Applicant submits the cited portions of the cited references do not render obvious the subject matter of claims 1, 10, 17, and 25. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "queuing the identity of a virtual connection in a queue when data that constitute a complete packet are buffered in a corresponding buffer." While the Examiner cites "(columns 17 and 18, lines 19-31 and 49-57 respectively)" of the Shimojo reference as allegedly disclosing "queuing a VCI for use in a buffer pointer management unit that associates the VCI with various connection parameters, and for outputting the data accordingly," Applicant notes the Examiner does not allege such portions of the Shimojo reference as teaching, for example, "...when data that constitute a complete packet are buffered in a corresponding buffer." Rather, the Examiner alleges "It would have been obvious to one of ordinary skill in the art at the time the invention was made to queue the identity for when data that constitute a complete packet is [sic] buffered to associate the VCI with various connection parameters, and to output the data accordingly." However, Applicant notes MPEP § 2143 states, in part, as follows:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applicant submits the Examiner merely alleges "It would have been obvious to one of ordinary skill in the art...", but doesn't appear to state any "suggestion or motivation...to modify the reference or to combine reference teachings." Moreover, Applicant sees no evidence that the Examiner has

determined any "reasonable expectation of success." Also, Applicant does not see evidence of "the prior art reference (or references when combined)...[teaching or suggesting] all the claim limitations." In accordance with MPEP § 2143, Applicant submits the Examiner has not made a *prima facie* showing of unpatentability as to the subject matter of claims 1, 10, 17, and 25. Thus, Applicant submits the cited portions of the cited reference fail to render unpatentable the subject matter of claims 1, 10, 17, and 25.

As another example, Applicant submits the cited portion of the cited references fail to disclose "obtaining prioritization information for the merged virtual connection." While the Examiner cites "(columns 9-10, lines 64-4) of the Sorinsuo reference, Applicant submits the Examiner does not show how the Examiner's allegation of "Sorinsuo further teaches various priority options including the treatment of OAM cells" supposedly justifies the conclusion "i.e., obtaining prioritization information." Applicant notes the portion of the Sorinsuo reference cited by the Examiner appears not to even mention "prioritization."

As yet another example, Applicant submits the cited portion of the cited reference fails to disclose "generating a data stream for the merged virtual connection based on the prioritization information and virtual connection identities stored in the queue, wherein the merged virtual connection is identified by a merged identifier, wherein each unit of data in the data stream includes the merged identifier." While the Examiner cites "(figure 9, item 960, X)" as allegedly disclosing "the merged identifier," Applicant can see no teaching as to a mere representation of the letter "X" disclosing a "merged identifier." Thus, Applicant submits the cited portion of the cited reference fails to disclose or suggest the claimed subject matter. While Applicant provides examples from claim 1, Applicant notes the Examiner has not addressed claims 10 or 17 individually, so Applicant submits claims 10 and 17 are also not shown to be unpatentable. Therefore, Applicant submits claims 1, 10, 17 and 25 are in condition for allowance.

Regarding claim 25, Applicant submits the cited portions of the cited reference fail to disclose the subject matter of claim 25. Applicant has already cited examples from claim 1 above as to why the subject matter of claim 1 is not unpatentable, and the Examiner brought a combined rejection of claims 1, 10, 17 and 25, so Applicant submits the Examiner has not shown how claim 25 would be unpatentable. As another example, Applicant submits the cited portions of the cited reference do not teach or suggest "...wherein dequeuing of data is performed in intervals, where different classes

receive priority for different ones of the intervals." While the Examiner cites "(column 24, lines 39-46)" of the Sorinsuo reference as allegedly disclosing such feature, Applicant submits Applicant sees no teaching as to "performed in intervals" or "for different ones of the intervals" in such portion. While the Examiner cites "(column 25; lines 3-8)" as allegedly disclosing "performed in intervals," Applicant sees no teaching in "(column 24, lines 39-46)" as to "where different classes receive priority for different ones of the intervals" in the context of the supposed "intervals" of "(column 25, lines 3-8)." Thus, Applicant submits the cited portions of the cited reference fail to disclose or suggest the subject matter of claim 25. Therefore, Applicant submits claim 25 is in condition for allowance.

Regarding claims 2, 18 and 26, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 2, 18, and 26. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein generating the data stream for the merged virtual connection further comprises dequeuing data from the plurality of buffers to produce the data stream, wherein dequeuing of the data is based on the prioritization information." While the Examiner cites "column 9, lines 57-64" as allegedly disclosing "...including when OAM cells are buffered as ordinary cells, i.e., based on the prioritization information," Applicant sees no teaching as to "when OAM cells are buffered as ordinary cells" allegedly leading to the Examiner's apparent conclusion "i.e., based on the prioritization information." Thus, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 2, 18, and 26. Therefore, Applicant submits claims 2, 18 and 26 are in condition for allowance.

Regarding claims 3, 11, 19 and 27, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 3, 11, 19, and 27. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein each of the plurality of virtual connections is included in a class of a plurality of classes, wherein the queue includes a plurality of queues, wherein each of the plurality of queues corresponds to a class of the plurality of classes, wherein queuing the identity of a virtual connection further comprises queuing the identity of the virtual connection into a corresponding one of the plurality of queues based on class of the virtual connection, wherein the prioritization information includes class prioritization information." While the Examiner cites "(column 10, lines 30-31)" as allegedly disclosing "scheduling can support priorities," Applicant submits "scheduling can support priorities" does not teach or suggest "...wherein the prioritization information includes class prioritization information." Thus, Applicant submits the

Examiner has not made a *prima facie* showing of obviousness. Therefore, Applicant submits claims 3, 11, 19 and 27 are in condition for allowance.

Regarding claims 4, 12, 20 and 28, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 4, 12, 20 and 28. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein each of the plurality of queues is a linked list, wherein queuing the identity of a virtual connection further comprises appending the identity of the virtual connection to a tail of a corresponding one of the linked lists based on class of the virtual connection." While the Examiner cites "(column 18, lines 37-38)" as allegedly disclosing "each of the queues is implemented using a chain of buffer pointers," Applicant notes the cited portion of the cited reference merely states "Each one of the cell groups and the idle buffer pointer chain 251 is provided in the form of a chain of buffer pointers...." Applicant sees no mention of "linked list" to support the Examiner's apparent conclusion of "i.e., linked list." Therefore, Applicant submits claims 4, 12, 20 and 28 are in condition for allowance.

Regarding claims 5, 13, 21 and 29, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 5, 13, 21 and 29. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein the prioritization information allocates available bandwidth on the merged virtual connection based on class." While the Examiner cites "(column 7, lines 42-50)," Applicant sees no mention of "prioritization." Therefore, Applicant submits claims 5, 13, 21 and 29 are in condition for allowance.

Regarding claims 6, 22 and 30, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 6, 22 and 30. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein obtaining prioritization information further comprises referencing a prioritization table that stores an accessing sequence for the plurality of queues." While the Examiner cites "(e.g., scheduler supporting priorities, see col. 10, lines 22-42)," Applicant sees no allegation by the Examiner of any element of the cited portion of the cited reference as purportedly disclosing or suggesting "a prioritization table that stores an accessing sequences for the plurality of queues." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness. Therefore, Applicant submits claims 6, 22 and 30 are in condition for allowance.

Regarding claims 7, 23 and 31, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 7, 23 and 31. Applicant has submitted arguments for the allowability of claims from which claims 7, 23, and 31 depends. Therefore, Applicant submits claims 7, 23 and 31 are also in condition for allowance.

Regarding claims 8, 24 and 32, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 8, 24 and 32. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein determining that data that constitute a complete packet are buffered further comprises detecting an end of message indication that indicates a final unit of data for the complete packet." While the Examiner cites "(e.g., see col. 9, lines 7-8)," Applicant does not see teaching in such portion as to "determining that data that constitute a complete packet are buffered." Therefore, Applicant submits claims 8, 24 and 32 are in condition for allowance.

Regarding claims 9 and 33, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 9 and 33. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "generating a data stream for a port by combining the data stream for the merged virtual connection with a data stream corresponding to an additional virtual connection, wherein the identifier corresponding to the additional virtual connection is different than the merged identifier." While the Examiner cites "(figure 9, item 934, VCCin/VCCout)," Applicant submits such portion does not appear to disclose "combining the data stream for the merged virtual connection with a data stream corresponding to an additional virtual connection." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness. Therefore, Applicant submits claims 9 and 33 are in condition for allowance.

Regarding claim 14, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claim 14. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein the prioritization information causes transitions between classes for dequeuing based on at least one of: a number of packets for a particular class included in the data stream for the merged virtual connection and a number of units of data for a particular class included in the data stream for the merged virtual connection." While the Examiner merely alleges "Sorinsuo teaches scheduling can support priorities (column 10, lines 30-31)," Applicant submits such a mere mention of "priorities" does not teach or disclose "the prioritization

information causes...." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness. Therefore, Applicant submits claim 14 is in condition for allowance.

Regarding claims 15 and 16, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claims 15 and 16. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein the virtual connection merging system is included in the ingress portion of a communication switch." As another example, Applicant submits the cited portions of the cited references fail to disclose or suggest "wherein the virtual connection merging system is included in the egress portion of a communication switch." While the Examiner cites "(figure 11, item 1120; column 10, lines 13-15)" and alleges "which is connected to the line interface having input/output ports," Applicant submits such allegation does not teach or suggest "is included in the ingress portion of a communication switch" or "is included in the egress portion of a communication switch." Therefore, Applicant submits claims 15 and 16 are in condition for allowance.

Regarding claim 34, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claim 34. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "limiting a number of times the identity of the virtual connection may be queued in the queue." Applicant notes the Examiner states "Shimojo inherently teaches...." While the Examiner asserts a rejection based on inherency, Applicant submits that the teachings of the cited reference fail to establish inherency in accordance with existing law. For example, Applicant submits that the Examiner has failed to establish that the public gained the benefit of the subject matter recited in claim 34 from the teachings of the cited reference. *Schering Corp. v. Geneva Pharmaceuticals*, 339 F.3d 1373 (Fed. Cir. 2003). As another example, Applicant submits that the Examiner has failed to establish that the subject matter recited in claim 34 is present in the teachings of the cited reference. *Mentor v. Medical Device Alliance*, 244 F.3d 1365 (Fed. Cir. 2001); *Scaltech v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999). Thus, Applicant submits that the subject matter recited in claim 34 cannot be considered to be inherent in the teachings of the cited reference. Accordingly, Applicant submits the Examiner has failed to satisfy the burden of proof required for asserting a rejection based on inherency. Therefore, Applicant submits that the Examiner has not shown claim 34 to be anticipated or rendered obvious by the cited reference. Consequently, Applicant submits claim 34 is in condition for allowance.

Regarding claim 35, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claim 35. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "when a first class of the plurality of classes does not have data to transmit during a particular interval for which it has priority, reverting the priority for the particular interval to a highest priority class." While the Examiner merely states "Sorinsuo teaches scheduling can support priorities (column 10, lines 30-31)," Applicant submits such mere mention of priorities does not disclose or suggest the subject matter recited in claim 35. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness. Therefore, Applicant submits claim 35 is in condition for allowance.

Regarding claim 36, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claim 36. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "when a first class of the plurality of classes does not have data to transmit during a particular interval for which it has priority, incrementing a pointer within a prioritization information table." While the Examiner cites "determined by referencing a flow table (column 21, lines 62-67)," Applicant submits the Examiner does not provide evidence as to how the Examiner apparently concludes such teaching purportedly discloses "i.e., class prioritization information." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness. Therefore, Applicant submits claim 36 is in condition for allowance.

Regarding claim 37, Applicant submits the cited portions of the cited references fail to disclose or suggest the subject matter of claim 37. As an example, Applicant submits the cited portions of the cited references fail to disclose or suggest "transmitting a number of packets during each interval of the intervals, wherein when a particular class has priority, including a predetermined number of packets corresponding to that class in the data stream." While the Examiner merely states "Sorinsuo teaches scheduling can support priorities (column 10, lines 30-31)," Applicant submits a mere mention of "priorities" does not teach or suggest "wherein when a particular class has priority, including a predetermined number of packets corresponding to that class in the data stream." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness. Therefore, Applicant submits claim 37 is in condition for allowance.

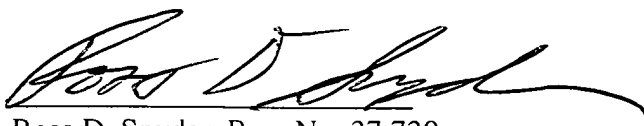
In conclusion, Applicant has overcome all of the Office's rejections, and early notice of allowance to this effect is earnestly solicited. If, for any reason, the Office is unable to allow the

Application on the next Office Action, and believes a telephone interview would be helpful, the Examiner is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

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Date



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